

## **PULSE WIDTH MODULATION SYSTEMS AND METHODS**

### **ABSTRACT**

Pulse width modulation systems and methods are described. In one aspect, a pulse width modulation system includes a register and a code word  
5 generator. The code word generator has an input for receiving a specified output frequency and a specified duty cycle and is operable to generate code words of different lengths. The code word generator is operable to generate a base code word having a length set to achieve the specified output frequency and having a thermometer code value set in accordance with the specified duty cycle. The  
10 code word generator is further operable to load the register with a code word pattern including a sequence of one or more copies of the base code word.